

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the present application.

1. (Currently Amended) In a GM, Solvay, or GM type pulse tube refrigerator a valve assembly comprising at least a valve disc and at least a valve seat and at least a thrust ball bearing in which one of the face of the valve disc and the face of valve seat is in contact with the face of the thrust ball bearing, wherein the thrust ball bearing is arranged between the valve disc and the valve seat, and there is no contact between the face of the valve disc and the face of the valve seat.

2. (Previously Presented) A valve assembly in accordance with claim 1 in which the thrust ball bearing is attached to the valve seat and the face of the valve disc is in contact with the face of the thrust ball bearing.

3. (Previously Presented) A valve assembly in accordance with claim 1 in which the thrust ball bearing is attached to the valve disc and the face of the valve seat is in contact with the face of the thrust ball bearing.

4.-8. (Cancelled)

9. (Currently Amended) A low torque, reduced wear rotary valve unit comprising a valve disc, a valve seat, and a thrust ball bearing, wherein the thrust ball bearing supports the rotating valve disc relative to the valve seat such that a very small gap is formed by arranging the thrust ball

bearing between the valve disc and the valve seat, and there is no contact between a face of the valve disc and a face of the valve seat.

10. (Currently Amended) The valve unit of claim 9 ~~where the face of the valve seat and the face of the valve disc are separated from each other by~~ in which the very small gap of up to is less than 25 μm .

11.-12. (Cancelled)